COVER SHEET

Surveying News at QUT

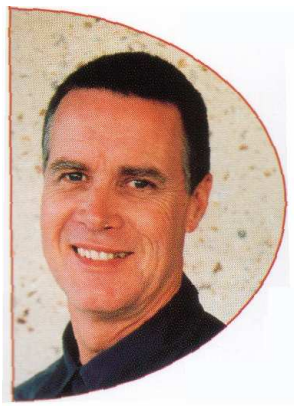
For CentreLineII QLD

Compiled by Robert Webb July 2002
School of Design and Built Environment
Faculty of Built Environment and Engineering

Profile of new Head of School of Design and Built Environment

PROFESSOR EDWIN JOHN HOCKINGS
B Arch (hons), PhD *Univ of Qld*, ARAIA
Head of School of Design and Built Environment
Queensland University of Technology

Professional Affiliations
Fellow Royal Australian Institute of Architects



Summary

John Hockings is an academic, architectural critic and author, and maintains a small design practice. He was most recently Head of the Department of Architecture at the University of Queensland before taking up a position at QUT. Specialisations include Architectural Design and Urban Design. Active researcher with numerous publications in the fields of architecture and urban design. Private practice involves a series of residential works throughout Queensland and in America. He regularly works in association with various architectural practices including Lindsay and Kerry Clare, John Mainwaring, Bligh Voller Nield and Hassells. He is also a regular consultant to State Governments and Local Authorities around Australia.

From 1981-85 practised architecture as Senior Associate with Noel Robinson Architects, which included work on a large range of award-winning mixed-use, commercial and residential projects throughout Australia.

In 1985, joined the Department of Architecture at the University of Queensland as a Lecturer, appointed Senior Lecturer in 1987, and Acting Dean in 1996 and Acting Head of Department in 1998. Became Head of Department in 2000. Has maintained a design and research practice since 1985, undertaking residential works and major consultancies for Local Authorities and State Governments. Has been the recipient of a number of architectural awards and prizes including First Prize in the Sydney 2000 Olympic Village International Design Competition. Recent projects conducted privately or in association with other architects include the Queens Street Mall, the Magistrates' Court competition and a major residential project on Stradbroke Island. Most recent major publication is a new book: Grose Bradley: The Poetics of Materiality L'arcaedizioni New York 1999.

He is currently chairman and Lord Mayor's representative on the BCC Urban Design Advisory Panel.

Professor Hockings is looking forward to working with all the staff and students in the new school. The great attraction of DBE, for Professor Hockings, is its unique collection of all the professional disciplines connected with designing the built environment, and he is keen to maintain the identity of all the disciplines while taking advantage of the exciting possibilities which are presented by their combination.

He will focus on developing a vigorous design culture within the undergraduate programs, and on establishing a new design research centre to coordinate the research activities of staff and postgraduate students, linking their work with industry and the community. He also will continue the focus within the school on workplace learning, internationalisation, and embedding the new digital technologies within the teaching and research frameworks of the various disciplines across the school.

QUT enjoys a unique position in Queensland as the sole provider in a number of these discipline areas and is the only university that covers all disciplines of the Built Environment. The merge will not only underline our positioning at a national level, but also provides new opportunities for students and graduates. The new HOS believes the size and complexity of the school requires a responsive management structure, providing the foundations that support, foster and build capacity and capability for innovation and creativity. There are several key roles that will facilitate the development of these aims. Senior staff, normally professors or associate professors, will provide the planning, mentoring and leadership needed to maintain discipline integrity in a large school. These "discipline leaders" provide the links to the profession and identify and lead critical new knowledge in the discipline areas.

Mr Murray Harris is the new surveying discipline leader in the new Design and Built Environment school management structure; with Mr Kevin Jones as the undergraduate surveying and mapping course co-ordinator and Dr John Hayes as the post-graduate course co-ordinator for survey practice and graduate certificate programs in Geomatics and GIS.

∑ Surveying with a Statistical Difference ∑

An analysis by QUT undergraduate students of traffic on the Goodwill Pedestrian and Cycle Bridge has found the Brisbane landmark is receiving heavy, constant use.

Surveying students Peter Bull and Paul Mowbray counted and classified bridge users during peak and quiet times and observed an average traffic flow of more than 350 people per hour.

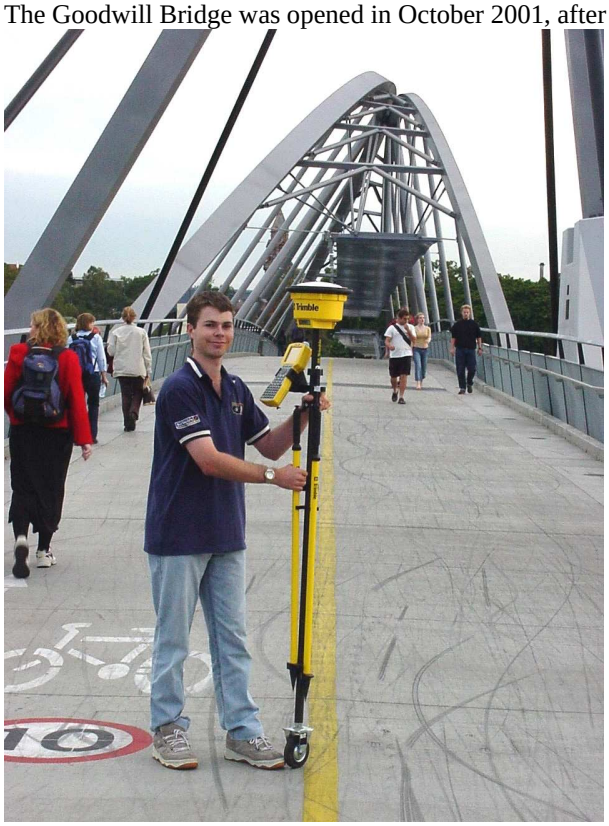
The students said the study, which was conducted for a statistics class during summer semester, probably underestimated the volume of traffic on the bridge as it was carried out during one of the quietest times of the year."Because most students were on holidays at the time, this sector of the community is almost certainly under-quoted in our study," Mr Bull said."We thought it would be used mainly as a scholarly and business connection, so we were very surprised to see how well it was being used for other purposes too." The students found almost two thirds of all traffic on the bridge was directed towards the city, with 89 per cent of users heading north between 8am and 9am on the weekday surveyed.

On weekends however, the direction of traffic was split almost equally, with many more people travelling to South Bank in the middle of the day. The students also analysed the type of pedestrians using the bridge, and found it was particularly popular with sportspeople.
These included:
• 67 per cent of users who were walkers;
• 27 per cent who were cyclists;
• 5 per cent who were runners; and
• 1 per cent who were rollerbladers.

“We found the bridge was well utilised by many sectors of the community, and we thought it was a worthwhile investment despite the controversy,” Mr Bull said.

A second group of students studied the bridge on different days and came to similar conclusions.Antony Mapfumo, Simon Marr and Mark Thackham also found that men used the bridge more often than women, and were much more likely to use it for sporting activities such as cycling.

The Goodwill Bridge was opened in October 2001, after three years of construction.



QUT surveying student Peter Bull rolling an RTK-GPS unit over the Goodwill Bridge.

Gold Coast Calibration Range

Fourth Year surveying students recently undertook measurement comparisons at the Coombabah sewerage treatment plant (Gold Coast) EDM calibration range as part of their practical requirements for the unit Advanced Geodesy. The first task of the day involved several EDM and leveling checks to ensure the validity of the information contained in the Calibration Certificate for the pillared base issued under regulation 13 of the *National Measurement Act 1960*. The three-dimensional positions of all pillars was validated to generally better than 3mm, thus ensuring confidence in the monumentation stability between date of observations undertaken by DNR&M for calibration certificate and the current comparisons.

A traditional fast-static geodetic style control survey was undertaken internally of the range monumentation. Topocentric obstructions at pillar 6 resulted in unsuitable GPS observations for both fast-static and RTK methods. A double occupation real-time kinematic survey was also undertaken to check the measurement consistent between ambiguity resolutions of fixed location observations. Equipment used included the Trimble 4800 GPS total station with TSC1 data recorder and two Trimble 4000SSE GPS with ground-plane geodetic antennas.

The fundamental purpose of the GPS campaign was to ensure that the GPS measurement system was operating within the manufacturers measurement specifications. A detailed analysis of results clearly showed that this was easily achieved. GPS zero-baseline observations and analysis were additionally undertaken by students prior to the project to examine the internal consistency of the two Trimble 4000 GPS units